The fact that we live in a world that moves crisis by crisis does not make a growing interest in outdoor activities frivolous, or ample provision for them unworthy of the nation's concern.

—John F. Kennedy



Exploring the outdoors from a kayak. Photo by Irvine Wilson.

he information presented throughout the 2007 *Virginia Outdoor Plan (VOP)* strongly supports the continued and renewed emphasis on outdoor recreation facilities and open space. The identification of outdoor recreation issues for the 2007 VOP was comprehensive and involved citizen comment through more than 80 public meetings, a statewide survey, an inventory of parks and recreation facilities for each jurisdiction, and substantial research by outdoor recreation and conservation professionals. The technical process and standards for determining the demand, supply and needs for outdoor recreation facilities is outlined in Appendix C. An overview to the demands, supply and needs inventory and the 2006 *Virginia Outdoors Survey (VOS)* is outlined in this chapter.

Changes in demographics have and will continue to influence outdoor recreation issues, trends and survey findings. The 2007 *VOP* takes the information gathered on a statewide basis and analyzes it by region. The issues, trends and 2006 *VOS* findings are reflected in the recommendations for each recreation region.

Public input related to outdoor recreation

Public meetings held in the fall of 2005 and an extensive comment period provided citizens and local governments the opportunity to comment on outdoor recreation, open space and conservation issues. The comments related to outdoor recreation have set the tone for the research and outdoor recreation and conservation recommendations presented in the 2007 VOP. In general, the comments reflect a changing Virginia with citizens having greater concern for the outdoor environment and awareness of diminishing opportunities as open space lands are lost to development.

Major statewide issues highlighted in these public meetings cover a range of topics categorized and summarized below.



Baseball Allstars. Photo by Richmond Parks, Recreation and Community Facilities.

Table II-1. Issues Identified in Fall 2005 Public Meetings for the Virginia Outdoors Plan

Торіс	Issues
 The need for adequate funding This issue is addressed in the following chapters: Chapter I: Vision for Virginia. Chapter III: Land Conservation. Chapter VI: Grant Opportunities for Outdoor Recreation, Open Space and Conservation. 	 Grant programs that provide funding assistance for trails, parks and recreational facilities receive far more requests than available funds can serve. Insufficient funding for maintenance results in deteriorating park and recreation infrastructure. Park and recreation budgets are declining relative to costs. There is increasing competition for federal, state and local tax resources. The Land and Water Conservation Fund has seen decreasing funding levels for many years. The Virginia Outdoors Fund has not received state funding for many years. Land values are appreciating at rates that exceed the available funding for land conservation efforts, especially in urban areas. Escalating costs for construction of park facilities lowers purchasing power of parks agencies.
General trends related to demographics This issue is addressed in the following chapters: • The Chapter VIII section entitled "Changing demographics and their impact on recreation resources."	 An increase in sedentary work styles and longer work hours affects public health. Commuting constraints including traffic congestion, air quality advisories and longer commutes limit leisure time. Busy lives and over-scheduled family activities limit impromptu outdoor recreation. Increasing cultural diversity brings varied outdoor ethics and attitudes and a need for multilingual outdoor education. There is difficulty in providing equal opportunity for leisure to all people. There is declining quality of life and livability of urban areas due to insufficient open space. There is greater division between the socio-economic status of citizens. Increasing crime (violence, drug use, vandalism, gangs) exists in communities and parks.
Nature-deficit disorder This issue is addressed in the following chapter: • Chapter VII-H: Environmental and Land Stewardship Education.	 Many people, particularly children, are not experiencing the out-of-doors. Richard Louv, in his book Last Child in the Woods, defines this problem as nature-deficit disorder, or stated more simply, a disconnect with nature. A lack of out-door experiences leads to a decline in understanding the natural world and its role in supporting life on the planet. This disconnect is also leading to major health problems, as well as contributing to inactive lifestyles, especially among our youngest citizens.

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Topic	Issues
Benefits of parks, recreation and open space This issue is addressed in the following chapters: Chapter V: Economic Benefits of Recreation, Tourism and Open Space. The section of Chapter VIII entitled "Health and wellness benefits of outdoor recreation." Chapter IX-D: Local and Regional Parks and Recreation.	 There is a need to articulate the economic benefits of outdoor recreation, including eco-tourism and the link to healthy lifestyles. Cost benefit analyses for parks, recreation and open space need to include the benefits of outdoor facilities and the contribution of open space to the health of the environment. Lack of comprehensive plans and zoning laws for green infrastructure and open space in new developments needs to be addressed to mitigate the long-term impact on the environment and resulting costs. Citizens need closer-to-home recreational opportunities that result in frequent and continued use and improved health benefits for their families. The concern over privatization of outdoor recreation programming at the local level, which would reduce the traditional offerings and role of local parks and recreation departments.
 Environmental impacts due to the loss of open space lands to development This issue is addressed in the following chapters: Chapter III: Land Conservation. Chapter IV: Green Infrastructure. Chapter VII-C: Historic and Landscape Resources. 	 Development tends to increase runoff and degrade water quality. Loss of tree canopy affects ecosystems, temperatures and soil stability. Lack of open space affects the functional capacity of the area's green infrastructure. There is a loss of land for outdoor activities, especially those that require large parcels of land. Declining air quality impacts vegetation, water quality and scenic viewing. Land conversion to developed areas decreases traditional viewsheds and cultural landscapes.
Bicycle and pedestrian facilities This issue is addressed in the following chapter: • Chapter IX-B-6: Transportation Programs.	 There is a need to encourage Rails to Trails and Rails with Trails to meet the growing needs for multipurpose trails. There is a need to encourage walkable, livable communities with safe routes to schools. There is a lack of self-powered commuter support systems such as bike lockers and showers for commuters. There is a need to educate motorists and bicyclists.
Trails and greenways This issue is addressed in the following chapter: • Chapter VII-A: Trails and Greenways.	 There is a need to include linear outdoor recreation facilities as part of green infrastructure planning. Advocates should stress the multiple benefits of greenways to include integration of wildlife corridors and the positive effects of linear corridors on water quality. There is a need to manage trails for multiple uses where appropriate. Access to recreational waters is needed.

Торіс	Issues
Land conservation This issue is addressed in the following chapters: Chapter III: Land Conservation. Chapter IV: Green Infrastructure.	 There is a need to conserve lands immediately due to escalating real estate values. There is a need to address development pressures on all Virginia lands. Land use alternatives need to address sprawl and open space preservation. There is a need for resources to promote natural resource protection. The Chesapeake Bay 2000 agreement goals should be met. There is a growing need to protect working farm and forest lands. The loss of viewsheds and cultural landscapes affects the quality of open space.
 Impacts of grey infrastructure on parks, scenic and cultural landscapes. This issue is addressed in the following chapters: Chapters I through IV include discussion and recommendations concerning the impact of modern infrastructure on traditional landscapes. 	 In park settings, there is a need to install utilities underground. Locate cell phone towers, wind mills and other towers outside of park boundaries and with minimal impact to scenic viewsheds. There is a need to better utilize Geographic Information System (GIS) technologies in planning and implementing outdoor recreation programs. There is a need to expand information technology to enhance educational programs about the values of outdoor recreation and land conservation.
Foundations and friends groups This issue is addressed in the following chapter: • Chapter IX-E: Private Sector.	There is a need to leverage the influence of non- profit organizations for citizen participation, vol- unteer contributions, training, building community capacity and fundraising in support of parks, recreation and land conservation.

Funding

Since the Land and Water Conservation Fund (LWCF) was first established in 1966, the demand for grant funds has been greater than the annual allocation from Congress. Many communities have ongoing efforts to improve the quality of life of their citizens through the provision of parks, trails, recreation facilities and programs. There are many demands placed on local tax revenues, and often the availability of grant funds to help offset the cost of community projects is the catalyst that decides which projects local governments can support.

The General Assembly established the Virginia Outdoors Fund (consisting of LWCF and state appropriated funds) in an effort to provide grant and loan funds to help meet local government needs for park and recreational funding. This program has seldom

received enough funding to meet the volume of requests for assistance received from local governments.

The Land Conservation Fund, governed by the Virginia Land Conservation Foundation and administered by the Department of Conservation and Recreation (DCR), was established to help acquire fee sample or easements on land for the protection of historic, conservation, forestal, agricultural and recreation values. This program is an important part of the state's efforts to meet the pledges of the Chesapeake Bay 2000 Agreement. Funding for this program has been inadequate to meet targeted objectives.

Another grant program administered by the DCR is the Recreational Trails Program. Requests for funding assistance received for this program consistently exceed the allocated amount by two to three times.

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Demographics

Virginians have noticed the trends in population growth and changing demographics (see Chapter VIII). The population is anticipated to increase from 7,567,000 to 8,601,900 by 2020 (www.coopercenter.org, 2006). This anticipated increase in population is expected to translate into increased demand for outdoor recreation. The growth of the Hispanic population, as well as immigration from many other countries, can change the way recreation programs need to be delivered.

The changes in the demographics of Virginia will also demand resources to meet the needs of an aging population, including accessibility for all citizens. The aging population may be the leading reason that the demand for active sports is shifting to individual and passive recreation, such as walking facilities.

As more adults and children engage in electronic leisure, technology becomes incorporated into new outdoor recreation activities such as geocaching, use of digital cameras and cell phones. Virginians concerned about the increase in health risks and chronic disease problems related to obesity were especially interested in having access to outdoor recreation opportunities in their communities. With populations increasing and demographics changing in Virginia, recreational programs and opportunities provided must be flexible enough to keep pace.

Demand, supply and needs for outdoor recreation

The 1965 Virginia's Common Wealth addressed for the first time in Virginia the correlation of population and recreation resource demand to a statewide program addressing the adequacy of parks and recreation facilities. The 1965 plan used National Recreation and Parks Association (NRPA) guidelines to estimate the needs for recreation lands and facilities. The plan considered outdoor recreation needs based on 90 acres per one thousand persons. In developing recommendations, consideration was given to the availability and cost of land; the rural, urban and industrial nature of a locality; the population demographics and incomes; and accessibility to the open countryside, woodlands, streams, seashore and natural areas.

A Virginia standard of 10 acres per 1000 persons is used to project acreage needed for state parks. Given this standard, 78,929 acres of state park lands are needed to adequately meet the demand based on the 2010 population projection of 7,892,900. The existing Virginia State Parks system consists of approximately

66,234 acres, which includes the 34 operating state parks, Breaks Interstate Park, five newly acquired and undeveloped parks, and several small satellites and monuments. This leaves a projected deficit of 12,695 acres of state parkland in 2010. With Virginia being one of the top 10 fastest growing states, it is anticipated that the acres of state parkland needed based on population will increase to 86,019 acres by 2020.

Factors that affect the demand for outdoor recreation include Virginia's population as well as out of state visitors. Tourism and the number of out of state visitors have continuously risen over the years. The estimated number of out of state visitors in 1965 was approximately 26 million, while the number of visitors is 2005 was estimated at 54.8 million (www.vatc.org, 2006). While every Virginian may not use recreation areas, it is almost certain that visitors to Virginia not only use the recreation facilities, but in many cases recreation areas are key destinations. This combination of tourism and recreation are significant to Virginia's economy. Local and regional partnerships are developing for nature tourism and recreation destinations, increasing the demand for Virginia's outdoor recreation beyond projections based solely on resident population estimates.

Mobility based on roads, public transportation and multimodal transportation options also affect the demand and trends for outdoor recreation areas and facilities. A subsection of Chapter IX, Transportation Programs, is a new inclusion in this VOP to address transportation initiatives and their interface with outdoor recreation. With many populated areas dealing with more traffic congestion and workers commuting longer distances throughout Virginia, user groups desire less travel time to recreation destinations. For many frequently repeated activities, persons indicate a travel time of 15 minutes to 30 minutes is acceptable.

The 2007 *VOP* recommendations are formed from findings of a demand, supply and needs analysis for outdoor recreation facilities, along with input from the public. Data relating to the percentage of population that are participating in each activity and the mean numbers of participation days per year are used to estimate the demand for recreational areas and facilities. The supply of outdoor recreation facilities is derived from a statewide inventory of recreational areas and facilities. This inventory is updated every five years as part of the outdoor recreation planning process and is maintained by DCR. The demand, supply and needs data was analyzed by four sampling regions, Mountain, Piedmont, Chesapeake and Urban Crescent. Analysis by region reflects the demographic

diversity of the regions. Regional survey findings and inventory data were used to calculate the need for recreational lands and facilities. Identified needs are important in directing the expenditure of local, state and federal funds, as well as guiding the private sector in outdoor recreation investments. An estimate of outdoor recreation areas and facility needs are presented on a statewide and planning district basis.

Statewide needs

Based on the 2006 VOS, the two highest needs for outdoor recreation in the next five years are access to recreational waters of the state and trails close to home. The trends indicated in the fall 2005 public meetings and the findings of the 2006 VOS support these statewide needs. Key recommendations in the 2007 VOP propose initiating a statewide trails and greenways planning process that incorporates various stakeholders and the public input process to better meet the growing demand. Recommendations for continuing a water access program to address recreational needs calls for strong partnerships between localities, planning districts and various state agencies including, the DCR, the Department of Game and Inland Fisheries, the Virginia Coastal Zone Management Program, Virginia Marine Resources Commission and the Department of Transportation. Public interest in existing and potential water trails along rivers and streams is growing, and these resources are being recognized for their contributions to local economies. The 2007 VOP recommends that DCR continue to offer technical support and coordination with localities for the development and management of water trails.

Regional outdoor recreation facility needs generally reflect the statewide trends, but the implementation and specific priorities may vary. Facility needs are summarized in each of the planning district chapters of this plan. Regions that show surpluses of recreational facilities may be tourist destinations and actually experience shortages during prime recreation seasons.

Virginia Outdoors Survey findings

The 2006 VOS was a cooperative project between DCR and Virginia Commonwealth University. The survey combines information about individual outdoor recreation activities, state park usage preferences, and opinions on natural resources and conservation. Information about the various activities is included in the program areas of this 2007 VOP.



Water Access is a top recreational priority. Photo by Virginia Tourism Corporation.

An overwhelming 91.9 percent of Virginians indicated that having access to outdoor recreational opportunities was either important or very important. Participation is most likely on weekends; however, with flexibility in work schedules and the numbers of retired or semiretired persons increasing, almost one-third or 28 percent of Virginians participate in outdoor recreation equally on weekends and during the week. With demographics in Virginia shifting to an aging population, the number of persons who enjoy outdoor recreation both during the week and on weekends is likely to increase into the foreseeable future.

Land conservation and green infrastructure: natural and open space protection

The 2006 *VOS* gathered information on natural resource and open space protection that relates directly to the land conservation and green infrastructure themes of the 2007 *VOP*. When asked how important it was to protect Virginia's natural and open space resources, 94 percent indicated it was either important or very important. Only 2 percent did not think it important to protect these resources, and another 4 percent responded they did not know if it was important.

As a follow-up question, the survey inquired if the state should spend public funds to acquire lands to prevent the loss of exceptional natural areas to development. Approximately 78 percent felt public funds should be used to protect lands, while 8 percent did

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not want to use public funds and 14 percent did not know. When then asked how public monies should be used to protect Virginia's natural and open space resources the following options were ranked:

- 71 percent favored outright purchase from willing sellers of the property, and then management as a natural area or park for public use.
- 24 percent preferred the purchase of easements that reduce development rights, but leave the land in private ownership with some public use allowed.
- 5 percent preferred the purchase of easements that reduce development rights, but leave the land in private ownership without public use opportunities.

Clearly from the responses above, the citizens of the Commonwealth prefer public access to lands acquired or protected by the state with public funds. The demands for natural areas and parks support this position as popularity increases for these outdoor recreation areas.

Types of outdoor recreation lands

When Virginians were polled about their preferences for outdoor recreation facilities, the balance of developed parks and natural area parks were important. Approximately one-third of those responding had no preference as to the type of park.

Table II-2. Types of Parks Desired in Virginia

Type of Park	Survey Preference
Developed Parks	39%
Natural Area Parks	31%
No Preference	30%

Virginia State Parks

The summary of trends, issues and needs for Virginia's State Parks are found in Chapter IX. The 2006 *VOS* reinforces the popularity and importance of State Parks to Virginians.

When asked for the top three reasons for having a system of state parks, the survey indicated the following:

- Conserving and protecting natural resources 61%
- Providing places to explore and enjoy natural and cultural heritage 59%
- Providing places for a variety of outdoor recreational activities contributing to a healthy lifestyle
 54%

Outdoor recreation activities rankings

DCR has been sampling participation rates in outdoor recreation since 1965. It is instructive to note the incremental changes in participation rates over time. Activities that have been in the top 10 have changed little over the years. Activities that are new to the top 10 that were not in the early years, such as "visiting historic sites," were simply not measured at that time. Table II-3 displays the results for popular outdoor activities ranked in 1965, 1996 and 2002, and contrasts them with the results of the 2006 *VOS*.

What do you suppose will satisfy the soul, except to walk?

-Walt Whitman

Water access

Based on the 2006 VOS, over 50 percent of Virginians felt the most needed outdoor recreation opportunities include public access to state waters for boating, fishing, swimming and beach use. The 1965 Virginia Common Wealth projected that swimming would be the most popular activity in 2000. While swimming is still very popular as fourth among outdoor recreation opportunities, swimming has declined from 52 percent household participation in 2000 to 44 percent participation in 2006. Most swimmers choose an outdoor or indoor pool setting rather than a natural body of water. The concern for water quality in primary contact sports may be a factor in this trend. Also, natural water bodies accessible within 30 minutes of the population are limited, making the use of local outdoor and indoor pools more convenient.

Fishing is also a popular outdoor recreation activity dependent on water access. It is ranked as the seventh most popular outdoor recreational activity with 26 percent of households participating. Slightly more



Biking along the James River in Richmond. Photo by Nathan Lott.

Table II-3. Percentage of Households Participating in Activities

1965	2006				
Rank	Rank	Activity	% of pop. 2006	% of pop. 2002	% of pop. 1996
3	1	Walking for pleasure	72	67.1	65
5*	2	Visiting historic sites	56	40.4	35
1	3	Driving for pleasure	55	62.4	60
2	4	Swimming	44	52.2	53
11	5	Visiting nat. areas, parks	44	26.9	24
N/A	6	Sunbathing on beach	36	39.1	42
7	7	Fishing	26	42.0	29
6	8	Picnicking	26	28.7	31
N/A	9	Using a playground	25	24.4	24
10	10	Boating	24	34.1	31
N/A	11	Jogging	24	21.5	20
N/A	12	Visiting gardens, arboretums	21	21.6	20
8	13	Bicycling	21	39.7	31
13	14	Camping	18	28.2	26
16	15	Hiking, backpacking	16	18.3	15
4#		Playing outdoor sports			
	16	Golf	14	25.1	20
	17	Basketball	12	15.4	12
	18	Fitness trail	10	7.3	6
	19	Soccer	9	8.7	6
	20	Snow skiing, boarding	9	11.9	13
	21	Tennis	8	16.2	20
12	22	Hunting	7	13.8	17

^{5*} Sightseeing was ranked in 1965 and not historic sites.

Virginians indicate that they fish in freshwater rather than saltwater, which may be a result of travel time to water bodies from population centers. Eighty to 85 percent of all fishing takes place on public water bodies. This further increases the demand for adequate public access at both freshwater and saltwater locations. Boating ranks as the 10th most popular outdoor recreation activity.

Trails and greenways

Trails and greenways rank alongside water access as equally important to citizens responding to the 2006 VOS. Some 49 percent of those surveyed indicated a high need for walking and hiking facilities. Walking for pleasure is Virginia's most popular outdoor activity with 71.7 percent of those surveyed indicating that it

was their favorite outdoor recreation activity. In addition to those walking, another 16 percent hike and backpack. Walking for pleasure and providing safe places for the public to enjoy being outdoors while walking is anticipated to continue to increase with population growth in Virginia. Trails and greenways programs at the local, regional and state levels will help meet the increasing demand for safe, aesthetically pleasing walking opportunities (See Chapter VII).

Thirty-nine percent of Virginians felt trails for bicycling were needed. This high ranking of perceived need may be the public's expression of a desire to have safe places to bicycle. Approximately 5 percent of all Virginians mountain bike and 20 percent ride bicycles on roads. However, 40 percent of Virginians felt there was a need for trails for bicycling. Given this response

^{4#} Playing outdoor sports was ranked as the 4th most popular outdoor activity in 1965; however, the individual sports were not ranked. Attending outdoor sports events was ranked 9th in 1965 and not in subsequent years. Horseback riding was ranked 14th in 1965 and 25th in 2005 with 5.8 percent of the population participating. Water skiing was ranked 15th in 1965 and 34th in 2005 with 4 percent of the population participating. Attending outdoor concerts/drama was ranked in 1965 and not in subsequent years. (Data from Virginia Outdoors Surveys 1996, 2002 & 2006. 1965 Data from Virginia's Common Wealth, November 1965.)

rate, the provision of safe places to bicycle could increase the popularity of this activity, as fear of riding on roads deters many potential bicyclists.

Natural areas

The growing trend for visiting natural areas and parks could be related to the interest in walking for pleasure as well as the growth in Virginia's senior population. In fact, over the past 10 years the participation rate for visiting natural areas has increased from 24 percent to 44 percent of households surveyed making this activity the fifth most popular outdoor recreation activity ranked in the 2006 VOS. The need for access to natural areas and parks was recognized as the third most important opportunity need in Virginia.

Hunting

Another significant trend in outdoor recreation activities indicated in the 2006 VOS is the decline in the numbers of hunters in Virginia. In the past 10 years, hunting has decreased from an activity engaged in by 17 percent of households in 1994 to 7 percent of households in 2006. The continued change in land use patterns from rural to urban and suburban may have driven this change. Sixty-five percent of hunters in Virginia hunt on private lands. The lack of access to previously hunted private lands due to landowner changes has also driven a change in supply of lands for hunting. In fact, where lands remain rural, hunting participation rates are much higher than in the urban crescent. Participation in the mountain region was 21.4 percent, Piedmont region was 16.4 percent and Chesapeake region was 16.5 percent, as contrasted with the participation rates of 6.1 percent in the urban crescent.

Camping

A similar, but not so dramatic, change in the numbers of persons camping is noted as a result of the 2006 VOS. In 1965, camping was the 13th most popular outdoor activity, and in 2006 it ranks 14th in popularity. The percent of households who camp have dropped from 26 percent in 1996 to 18 percent in 2006. Of those camping, 63 percent camp at public sites, with 55 percent of these using a state park or other state land. Approximately 70 percent of campers use tents and prefer drive in campsites. Amenities most important to campers include flush toilets and showers.

Table II-4. Types of State Park Campsites Preferred by Virginians

Campsite with water/electric	61%
Tent camping without water/electric	25%
Pack in campsite	4%
Canoe/boat in campsite	10%

Public vs. private lands for outdoor recreation

The only sports in which over 60 percent of participants used private recreation areas more than public areas were for snow skiing and snow boarding and for hunting. Approximately 65 percent of hunters hunt on private lands. All other outdoor recreation opportunities are mostly conducted on public lands. Even participants in golf, tennis and swimming indicated that over 63 percent of their activities in these sports were held on public property.

Table II-5. Active Sports Participation

Active sports remain popular outdoor recreation activities for Virginians, with over 80 percent of activities such as of soccer, softball, basketball and baseball being played at public facilities. Participation rates for active sports surveyed in the 2006 Virginia Outdoors Survey are shown below.

Sport	Va. household participation rate
Golf	14.6%
Basketball	12.5%
Soccer	9.2%
Tennis	8.6%
Softball	7.5%
Football	5.8%
Baseball	5.5%
Volleyball	3.4%



Youth soccer. Photo by Herndon Parks and Recreation.